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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/938,410	08/23/2001	Chang Wan Ha	020488-001000US	9968

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EXAMINER

HO, HOAI V

ART UNIT PAPER NUMBER

2818

DATE MAILED: 09/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/938,410

Applicant(s)

HA, CHANG WAN

Examiner

Hoai V. Ho

Art Unit

.2818

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

1. This office acknowledges receipt of the following items from the Applicant:
Information Disclosure Statement (IDS) was considered.
2. Claims 1-10 are presented for examination.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuo et al. USP 5995415 (IDS) in view of Thummalapally et al. USP 6016270 (IDS).

Figure 4 of Kuo discloses a method of forming a simultaneous operation flash memory device having a flexible memory bank partition (col. 12, lines 25-27), said method comprising the steps of each memory array having associated row (22) and column address decoders (32 and 34); and partitioning the plurality of flash memory arrays into a first memory bank (lower bank) and a second memory bank (upper bank) by coupling first bank row and column address lines between first bank row and column pre-decoders(48) and the row and column decoders associated with the first memory bank and coupling second bank row and column address lines between second bank row and column pre-decoders (46) and the row and column decoders associated with the second memory bank, wherein the step of partitioning is performed by selecting from a plurality of preformed metal masks, said plurality of metal masks being

distinguished from one other by variances in pre-decoded address line patterns (col. 12, lines 25-39). Also see col. 2, lines 31 to col. 3, line 15.

Figure 4 of Kuo only shows one array instead of providing a plurality of flash memory arrays as the claimed invention. However, this limitation was well known in the art at the time the invention was made. For example, Figure 1 of Thummalapally discloses a plurality of flash memory arrays (14s). It would have been obvious to a person of ordinary skill in the art at the time invention was made to add more arrays to Kuo's simultaneous operation flash memory device which utilizes the a time⁴shared address bus and separate memory cell access paths to perform read cycle operation in one memory cell bank in the array while an algorithm operation, such as an erase/reprogram operation, is performed simultaneously in another memory cell bank in the array (col. 1, 10-61) as taught by Thummalapally because Thummalapally suggests that a read operation can always be performed when an algorithm operation is in progress ... the internal address bus is not required during byte program algorithm execution and thus, there is zero overhead on byte program time (col. 2, lines 20-31). The increase system performance would have motivated an artisan at the time the invention was made to follow Thummalapally teachings in the simultaneous operation flash memory device.

5. When responding to the office action, Applicants are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist the examiner to locate the appropriate paragraphs.

6. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned (see MPEP 710.02 (b)).

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to whose telephone number is (703) 308-4839. Other inquiries of this application should be called to (703) 308-0956.



H. Ho
September 9, 2002



Hoai V. Ho
Primary Examiner
Art Unit 2818